

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Parent Application of

ESCAICH, Sonai

Atty. Ref.: 1721-82

Serial No. 10/520,820

Group: Unknown

Filed: January 7, 2005

Examiner: Unknown

For: PATHOGENICITY DETERMINANTS WHICH CAN BE USED AS TARGETS FOR

DEVELOPING MEANS FOR PREVENTING AND CONTROLLING BACTERIAL

INFECTIONS AND/OR SYSTEMIC DISSEMINATION

May 23, 2005

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

SUBMISSION

Submitted herewith is a copy of the references listed on the PTO-1449 Form and in the International Search Report, copies of which were filed with the application on January 7, 2005. Return of an initialed copy of the PTO-1449 Form filed January 7, 2005 (copy attached), pursuant to MPEP Section 609, is requested.

Respectfully submitted,

NIXON & VANDERHYE P.C.

Reg. No. 36,663

BJS:pp 1100 North Glebe Road, 8th Floor Arlington, VA 22201-4714

Telephone: (703) 816-4000 Facsimile: (703) 816-4100

| Sheet 1 of 3 | Sh | eet | 1 | of | 3 |
|--------------|----|-----|---|----|---|
|--------------|----|-----|---|----|---|

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

| | 3717 DET/EP20 | 03/008209 |
|-----------------|-------------------|-----------|
| ty. Docket No. | No. | |
| 1721-82 | unknov | wn _ |
| Applicant | <u>%</u> | COPY |
| ESCAICH, Sonaia | ы мау 2 3 2005 gg | ••• |
| Filing Date | ₹ 9 /A.U. | |
| January 7, 2005 | at unknown | |

| | | U.S. P | ATENT DOCUMENTS | | | | |
|------------------|-----------------|------------|---------------------------------------|-------|-------------|--------------------|----------------|
| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING IF APPRO | DATE OPRIAT |
| | 6 020 121 A | 2/1/2000 | BOGGS et al. | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | ļ | |
| | | | · · · · · · · · · · · · · · · · · · · | | | | |
| | | | | | | | · · · · · · · |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | FOREIGN | PATENT DOCUMENTS | | | | |
| | | | | | | TRANS | LATION |
| | DOCUMENT | DATE | COUNTRY | CLASS | SUBCLASS | YES | NO |
| | 99/66049 A | 12/23/1999 | WO | | | | |
| | 00/28038 A | 05/18/2000 | WO | | | | |
| | 00/44906 A | 08/03/2000 | WO | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

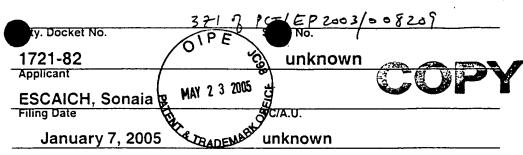
| - | | | |
|-----------|--|-----------------|--|
| *Examiner | | Date Considered | |

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

*Examiner

-INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)



OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.) YETHON, et al, "Involvement of waaY, waaQ and waaP in the modification of E.coli lipopolysaccharide and their role in the formation of a stable outer membrane". Journal of Biological Chemistry, American Society of Biological Chemists, Baltimore, MD, US, Vol. 273, no. 41, 9 October 1998, Pgs. 26310-26316 HEINRICHS, et al., "Molecular basis for structural diversity in the core regions of the lipopolysaccharides of Escherichia coli and Salmonella enterica", Molecular Microbiology, Vol. 30, No. 2, October 1998, Pgs. 221-232 BURNS et al.. "Comparison of loss of serum resistance by defined lipopolysaccharate mutants and an acapsular mutant of uropathogenic Escherichia coli 075:K5". Infection and Immunity. Vol. 66. No. 9, 1998. Pgs. 4244-4253 RUSSO et al.. "Loss of the antigen moiety from the lipopolysaccharide of an extraintestinal isolate of Escherichia coli has only minor effects on serum sensistivity and virulence in vivo", Infection and Immunity, Vol 63, No, 4, 1995, Pgs. 1263-1269 HONG et al.. "Effect of mutations in Shigella flexneri chromosomal and plasmid-encoded lipopolysaccharide genes on invasion and serum resistance", Molecular Microbiology, vol. 24, no. 4, 1997, pgs. 779-791 MERINO et al., "Cloning and sequencing of the Klebsiella pneumoniae 05 wb gene cluster and its role in pathogenesis. Infection and Immunity, vol. 68, no. 5, May 2000, pgs. 2435-2440 RAUTEMAA et al., "Complement-resistance mechanisms of bacteria", Microbes and Infection, vol. 1, no. 10, August 1999, pgs. 785-794 SHEA et al.. "Signature-tagged mutagenesis in the identification of virulence genes in pathogens", Current Opinion in Microbiology, vol. 3, no. 5, October 2000, pgs. 451-458 Database Uniprot, 1 May 1999, "WaaC Accession No. Q977 Database Uniprot. 1 May 2000, "WaaQ" Accession No. @ Q9 R9 B5 Database Uniprot, 1 May 2000, "WaaP" Accession No. Database Uniprot. 1 May 2000, "WaaG Accession No. Q9 R2 L 8 Database Uniprot. 1 October 1994, "RFAF" Accession No . P37692 Database Uniprot, I May 1999, "WaaQ" Accession No. Database Uniprot, 1 May 1992, "GalU" Accession No. Database Uniprot, 1 June 1994, "PGMU Database Uniprot, 1 February 1995, "KpsD Accession No. Q03961 Database Uniprot, 1 November 1996, "Neud" Accession No. Database Uniprot, 1 July 1993, "GmnB" Accession No. Database Uniprot, 1 November 1990, "RFAD Accession Database Uniprot, 15 July 1999, "rfaE Accession No. Database Uniprot. 1 March 2002, "DltD" Accession Database Geneseq, 2 July 2002, "DLTA" Accession No. ABP30484 KNEIDINGER et al, "Biosynthesis pathway of ADP-L-glycero-beta-D-manno-heptose in Escherichia coli", Journal of Bacteriology, vol. 184, no. 2, January 2002, pgs. 363-369 KNEIDINGER et al. "Biosynthesis of nucleotide-activated D-glycero-D-manno-heptose" Journal of Biological Chemistry, Vol. 276, No. 24, 15 June 2001, Pgs. 20935-20944 SISTI et al. "In vitro and in vivo characterization of a Bordetella bronchiseptica mutant strain with a deep rough lipopolysaccharide structure", Infection and Immunity, Vol. 70, No. 4, April 2002, Pgs. 1791-1798 YETHON et al. "Purification and characterization of Waap from Escherichia coli, a lipopolysaccharide kinase essential for outer membrane stability", Journal of Biological Chemistry, Vol. 275, No. 8, 23 February 2001, pgs. 5498-5504 YETHON et al. "Salmonella enterica serovar typhimurium waaP mutants show increased susceptibility to polymyxin and loss of virulence in vivo". Infection and Immunity. Vol. 68. No. 8, August 2000, Pgs. 4485-4491 GENEVAUX et al. "Identification of Tn10 insertions in the rfaG, rfaP, and galU genes involved in lipopolysaccharide core biosynthesis that affect Escherichia coli adhesion". Archives of Microbiology, Vol. 172, No. 1, July 1999, Pgs. 1-8

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Date Considered

| Sh | eet | 3 | of | 3 |
|----|-----|---|----|---|
| | | | | |

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

| | 3717 PCT | 182003/0082 | L09 |
|-----------------|--------------------|-------------|------|
| ty. Docket No. | | No. | |
| 1721-82 | OIP E VOS | unknown | |
| Applicant | 205 3 | 1 | CODY |
| ESCAICH, Sonaic | MAY 23 7005 3 | | CUFF |
| Filing Date | 8 | TC/A.U. | |
| January 7, 200 |) Store Concernage | unknown | |

| | TRADE |
|---|--|
| - | NGELEKA et al, "Characterization of a polysaccharide capsular antigen of septicemic Escherichia coli 0115: K "V165": |
| | F165 and evaluation of its role in pathogenicity. Infection and Immunity. Vol 60, No. 12, 1992, Pgs. 5048-5056 |
| | DAINES et al. "NeuD plays a role in the synthesis of sialic acid in Escherichia coli K1" Fems Microbiology Letters, Vol. |
| | 189. No. 2, 15 August 2000, Pgs. 281-284 |
| | YETHON et al. "Mutation of the lipopolysaccharide core glycosyltransferase encoded by waaG destabilizes the outer membrane of Escherichia coli by interfering with core phosphorylation", Journal of Bacteriology, Vol. 182, No. 19, October 2000, Pgs. 5620-5623 |
| | NESPER et al. "Characterization of Vibrio Cholerae 01 E1 Tor galU and galE mutants: Influence on lipopolysaccharide structure, colonization, and biofilm formation", Infection and Immunity, Vol. 69, No. 1, January 2001, Pgs. 435-445 |
| | ABACHIN et al, "Formation of D-alanyl-lipoteichoic acid is euired for adhesion and virulence of Listeria |
| | monocytogenes", Molecular Microbiology, Vol. 43, No. 1, January 2002, Pgs. 1-14 |
| | MARTINDALE et al. "Genetic analysis of E. Coli K1 gastrointestinal colonization", Molecular Microbiology, Vol. 37, No. 6, September 2000, Pgs. 1293-1305 |
| | CHANG HWAN-YOU et al, "Virulence and outer membrane properties of a galU mutant of Klebsiella pneumoniae CG43", Microbial Pathogenesis, Vol. 20, No. 5, 1996, Pgs. 255-261 |
| | REGNI et al, "Crystal structure of PMM/PGM: An enzyme in the biosynthetic pathway of P. aeruginosa virulence factors", Structure, vol. 10, no. 2, February 2002, pgs. 269-279 |
| | TANG et al. "Pathogen virulence genes – implication for vaccines and drug thereapy", British Medical Bulletin. Churchil Livingstone. London. GB, Vol. 55, No. 2, 1999, pgs. 387-400 |
| | MOXON et al. "Challenge of investigating biologically relevant functions of virulence factors in bacterial pathogens", Philosophical Transations, Royal Society of London, Biological Sciences, Royal Society, London, GB, Vo 355, No. 1397 25 May 2000, pgs. 643-656 |
| | VALVANO et al., "The rfaE gene from Escherichia coli encodes a bifunctional protein involved in biosynthesis of the lipopolysaccharide core precursor ADP-L-glycero-D-manno-heptose", Journal of Bacteriology, Washington, DC, US, Vol. 182, No. 2, January 2000, Pgs. 488-497 |
| | LEE et al, "Molecular cloning and characterization of the nontypable Haemophilus influenzae-2019 rfaE gene required for lipopolysaccharide biosynthesis", Infection and Immunity, American Society for Microbiology, Washington, US, vol. 63, no. 3, 1995, pgs. 818-824 |
| | CIESLEWICZ et al. "Thermoregulation of KPSF, the first region 1 gene in the KPS locus for polysialic acid biosynthesis in Escherichia coli K1", Journal of Bacteriology, Washington, DC, US, vol. 178, no. 11, June 1996, Pgs. 3212-3220 |
| | BOYD et al. "Chromosomal regions specific to pathogenic isolates of clustered distribution", Journal of Bacteriology, Washington, DC, US, Vol. 180, No. 5, March 1998, Pgs. 1159-1165 |
| | AUSTIN et al., "Genetic analysis of lipopolysaccharide core biosynthesis by Escherichia coli k12 insertion mutagenesis of the RFA locus". Journal of Bacteriology, Washington, DC, US, Vol. 172, No. 9, September 1990, Pgs. 5312-5325 |
| | STOJILJKOVIC et al., "Cloning and characterization fo the Neisseria Meningitidis RFAC gene encoding Alpha-1, 5 Heptosyltransferase I". Fems Microbiology Letter, Amsterdam, NL, Vol. 151, No. 1, 1997, Pgs. 41-4999 |
| | International Search Report dated Aug 26, 2004 in 12CT/EPO3/08209 |

| *Examiner | Date Considered | |
|-----------|---------------------|--|